

Work Order ID 124314

September-11-14 12:01:59 PM

124314

Page 1

Item ID: D3580-5

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Bracket

24
u

Start Date: 10/02/14

Start Qty: 2.00

2

Required Date: 10/02/14

Req'd Qty: 2.00

2

Reference:

Cust Item ID:

Customer:

Approvals: Process Plan: MLJ

Date: 14-09-17 Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3580	C								

100

100

Waterjet

FLOW WATER JET

0.00

(30)

12/12/14/09/30

FLOW CNC Waterjet

Memo

1-Cut D3580-1F as per Dwg

Dwg Rev: C

Prog Rev: C

2-Deburr if necessary

110

110

QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

0.00

(30)

12/12/14/09/30

120

120

QC

Quality Control

QC8- Inspect parts - second check

0.00

(30)

DAS

38

9-89

14-10-01

Memo

0.00

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Date:

Work Order update only

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
Part No. _____			Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
NCR No. _____			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
			Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					
Root Cause	Date	Step	Qty	Description of work order update or non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Design											
Doc/Data											
Equip/Tooling											
Handling/Pre											
Material											
Operator											
Offset/Setup											
Process											
Supplier											
Training											
Transport											
Unapproved											
FAULT CATEGORY											
Landing Gear			General								
<input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			<input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function								
			<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence								
			<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge								
			<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled								
			<input type="checkbox"/> Other								

Work Order ID 124314

September-11-14 12:01:59 PM

124314

Page 2

Item ID: D3580-5

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Bracket

Stop

NS2

Start Date: 10/02/14

Start Qty: 2.00

2

Cust Item ID:

Required Date: 10/02/14

Req'd Qty: 2.00

2

Customer:

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:		Stop	*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Locations	0.00							DAS 26 9-89
130									SEP 30 2014
Packaging	Memo	0.00							
Packaging									

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Quality Control

Memo

0.00

MJ 14-10-02

MJ 14-10-01

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: _____

Work Order update only

Work Order: _____	DISPOSITION			AGAINST DEPARTMENT/PROCESS				
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>			
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>			
	Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>				

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear		General									
Bending		Bend <input type="checkbox"/>	Folio/Program <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>						
Centre Not Concentric		BOM/Route <input type="checkbox"/>	Grain <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Set-up <input type="checkbox"/>						
Cracks		Broken/Damage/Defect <input type="checkbox"/>	Hardware <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>						
Crimp/Kink/Ripple/Wave		Burrs <input type="checkbox"/>	Inspection Incomplete/Unqualified <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Weld <input type="checkbox"/>						
Cuffs		Contamination <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Moved <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>						
Crushing		Countersink <input type="checkbox"/>	Misaligned/off center <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>							
Heat Treat		Cut Too Short <input type="checkbox"/>	Misaligned/Off center <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>							
Inspection Strip in Tube		Drawing <input type="checkbox"/>	Misread <input type="checkbox"/>								
Marks/Chatter		Drill Holes <input type="checkbox"/>	Off-set <input type="checkbox"/>								
Turning Sequence		Finish <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>								
Wave/Twist in Tube		Fit/Function <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>								

Picklist Print

September-11-14 12:01:59 PM

Page 1

Work Order ID: 124314

124314
D3580-5

Parent Item: D3580-5

Parent Item Name: Bracket

Start Date: 10/02/14

Required Date: 10/02/14

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A 14.07.03 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S18GA		Purchased	No				sf	351.3100		1			

M304S18GA

304/316 .050 Sheet

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
MAT019	340.51	
117188	3	
117766	5	
120604	5	
122325	3	
123155	3	
124572	37.5	
M126647	31.55	
M128254	52.71	
M128435	36.95	
M128864	15	
M129530	147.8	
MAT020	10.8	
124029	0.8	
MT26098	10	

**

14/09/30

.4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: _____

Work Order update only

Work Order: _____	DISPOSITION			AGAINST DEPARTMENT/PROCESS				
Part No. _____	Rework	Scrap	Use-as-is	Skid-tube	Crosstube	Water Jet	Engineering	
NCR No. _____	Suspected Unapproved			Machining	Small Fab	Prod. Eng. Coor.	Quality	
				Thermoforming	Finishing	Rec/Store/Packaging	Other	
				Large Fab	Composite	Supplier		

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear	General							
	Bending	<input type="checkbox"/>	Bend	<input type="checkbox"/>	Folio/Program	<input type="checkbox"/>	Outside Dimensions	<input type="checkbox"/>
	Centre Not Concentric	<input type="checkbox"/>	BOM/Route	<input type="checkbox"/>	Grain	<input type="checkbox"/>	Over/Under tolerance	<input type="checkbox"/>
	Cracks	<input type="checkbox"/>	Broken/Damage/Defect	<input type="checkbox"/>	Hardware	<input type="checkbox"/>	Part Incorrect	<input type="checkbox"/>
	Crimp/Kink/Ripple/Wave	<input type="checkbox"/>	Burrs	<input type="checkbox"/>	Inspection Incomplete/Unqualified	<input type="checkbox"/>	Part Lost/Missing	<input type="checkbox"/>
	Cuffs	<input type="checkbox"/>	Contamination	<input type="checkbox"/>	Instructions Incomplete/Unclear	<input type="checkbox"/>	Part Moved	<input type="checkbox"/>
	Crushing	<input type="checkbox"/>	Countersink	<input type="checkbox"/>	Misaligned/off center	<input type="checkbox"/>	Positioned Wrong	<input type="checkbox"/>
	Heat Treat	<input type="checkbox"/>	Cut Too Short	<input type="checkbox"/>	Mislabeled	<input type="checkbox"/>	Power Loss/Surge	<input type="checkbox"/>
	Inspection Strip in Tube	<input type="checkbox"/>	Drawing	<input type="checkbox"/>	Misread	<input type="checkbox"/>	Other	<input type="checkbox"/>
	Marks/Chatter	<input type="checkbox"/>	Drill Holes	<input type="checkbox"/>	Off-set	<input type="checkbox"/>		<input type="checkbox"/>
	Turning Sequence	<input type="checkbox"/>	Finish	<input type="checkbox"/>	Out of Calibration	<input type="checkbox"/>		<input type="checkbox"/>
	Wave/Twist in Tube	<input type="checkbox"/>	Fit/Function	<input type="checkbox"/>	Out of Sequence	<input type="checkbox"/>		<input type="checkbox"/>

DART AEROSPACE LTD	Work Order:	124314
Description: Bracket	Part Number:	D3580-5
Inspection Dwg: D3580	Rev: C	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

DAS

Measured by:	<i>De /fr</i>	Audited by:	<i>38</i> <small>9-80</small>	Preliminary Approval:	
Date:	<i>14/09/30</i>	Date:	<i>14-10-01</i>		Date:

Rev	Date	Change	Revised by	Approved
A	14.07.14	New Issue	KJ	MM

8 7 6 5 4 3 2 1

D

D

C

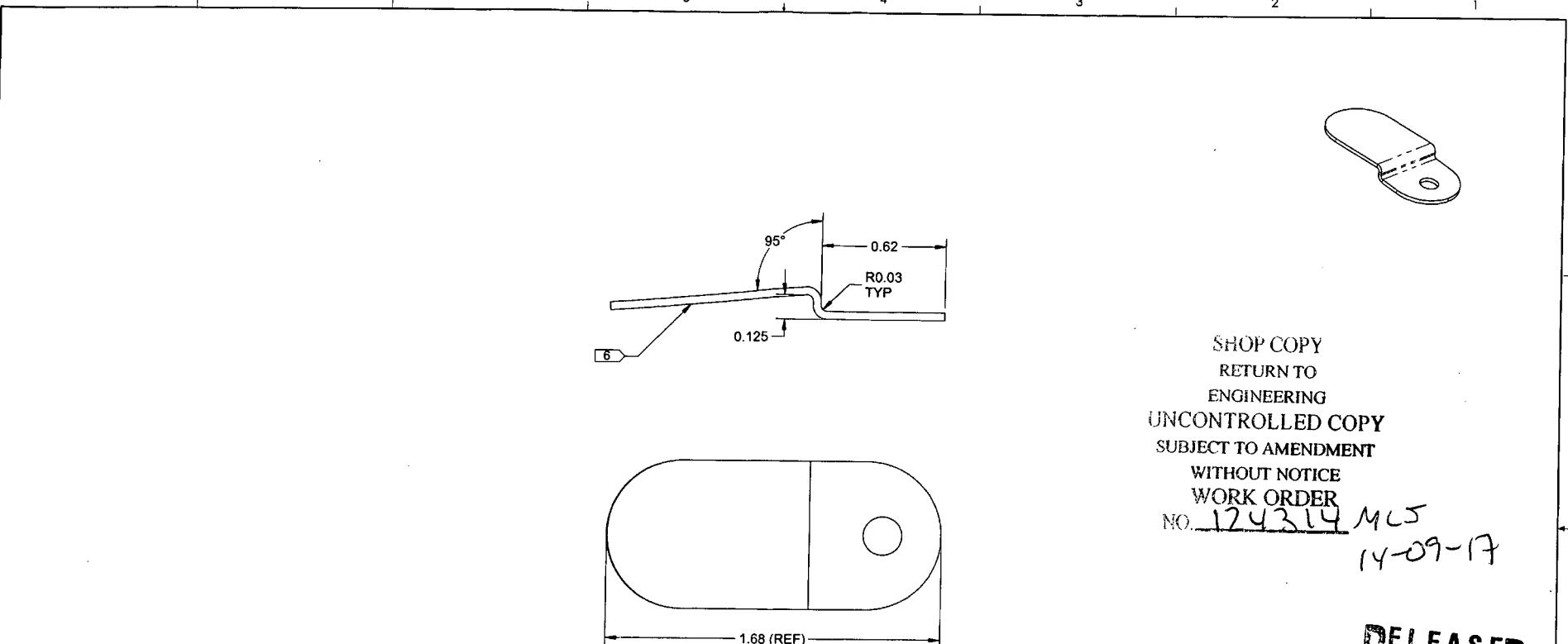
C

B

B

A

A



D3580-1 JOGGLE BRACKET

A

NOTES:

- 1) MATERIAL: MADE FROM D3580-1F
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1 ON THE UNDERSIDE OF THE PART AS INDICATED
- 7) WEIGHT: 0.01 lbs

8 7 6 5 4 3 2 1

NO. 174314 MLC

14-09-17

RELEASED
2014-07-02
AN

APPROVED

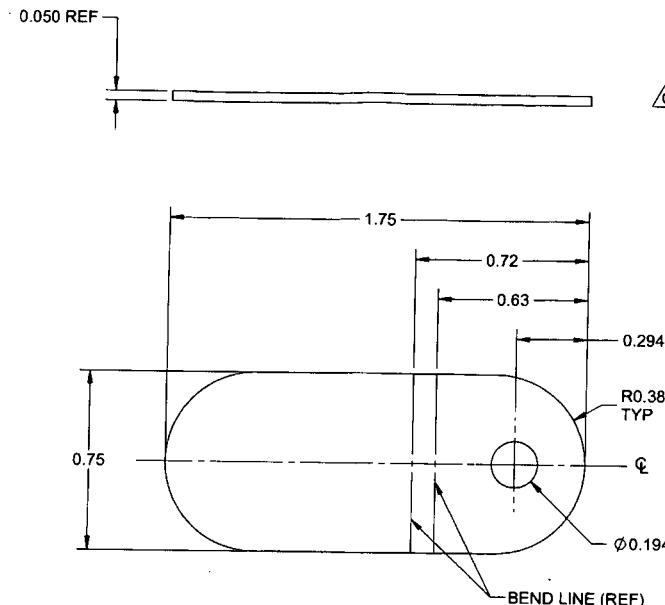
C	UPDATED DWG FORMAT. ADDED D3580-3 (ZN B5-3) AND D3580-5 (ZN B5-4). ADDED SIDE VIEW TO D3580-1F (ZN D5-2)		AK	14.02.12
B	REMOVE POWDER COAT		CB	07.07.09
A	NEW ISSUE		CB	07.05.15
REV.	DESCRIPTION			
DESIGN	AK	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
DRAWN	AK	DRAWING NO.	REV. C	
CHECKED	VS	D3580	SHEET 1 OF 4	
MFG. APPR.	JLM	TITLE	SCALE	NTS
APPROVED	HS	DE APPR.	DS	
DATE	14.02.12			

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8 7 6 5 4 3 2 1

D

D



D3580-1F FLAT PATTERN

RELEASED
R 2014-07-02
JW

A NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, 18 GAUGE (0.050 THICK)
PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240
(REF DART SPEC M304S18GA)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.01 lbs

8 7 6 5 4 3 2 1

APPROVED

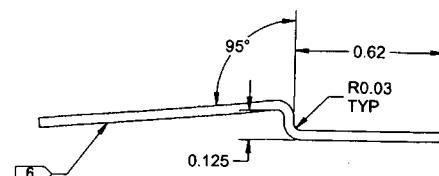
DESIGN	AK	DART AEROSPACE LTD	
DRAWN	AK	HAWKESBURY, ONTARIO, CANADA	
CHECKED	VS	DRAWING NO.	
MFG. APPR.	JLM	REV. C	
APPROVED	HS	D3580	
DE APPR.	DS	SHEET 2 OF 4	
DATE 14.02.12		TITLE	SCALE
JOGGLE BRACKET		NTS	NTS

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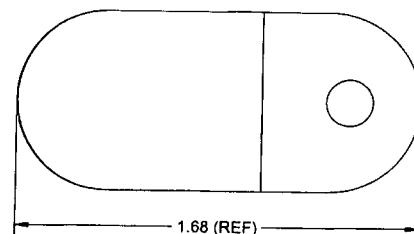
A

8 7 6 5 4 3 2 1

D



C



B

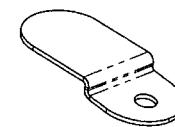
△ D3580-3 JOGGLE BRACKET

A

NOTES:

- 1) MATERIAL: MADE FROM D3580-1F
- 2) FINISH: POWDER COAT "BLACK" (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1 ON THE UNDERSIDE OF THE PART AS INDICATED
- 7) WEIGHT: 0.01 lbs

8 7 6 5 4 3 2 1



D

C

B

APPROVED

DESIGN	AK	DART AEROSPACE LTD	
DRAWN	AK	HAWKESBURY, ONTARIO, CANADA	
CHECKED	VS	DRAWING NO.	
MFG. APPR.	JLM	REV. C	
APPROVED	HS	D3580	SHEET 3 OF 4
DE APPR.	DS	TITLE	SCALE
		JOGGLE BRACKET	
DATE	14.02.12	NTS	

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RELEASED
2014-07-02

A

8 1 7 1 6 1 5 1 4 1 3 1 2 1 1

D

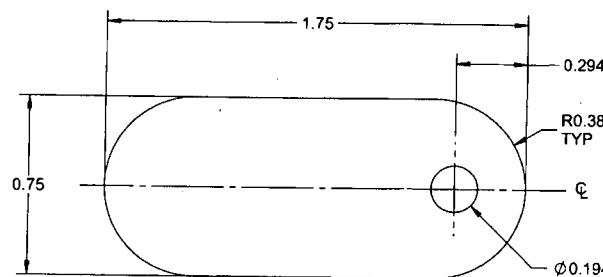
D

0.050 REF



C

C



△ D3580-5 BRACKET

B

B

RELEASED
2014-07-02
MP

NOTES:

- 1) MATERIAL: MADE FROM D3580-1F
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.01 lbs

8 1 7 1 6 1 5 1 4 1 3 1 2 1 1

APPROVED

DESIGN	AK	DART AEROSPACE LTD	
DRAWN	AK	HAWKESBURY, ONTARIO, CANADA	
CHECKED	VS	DRAWING NO.	
MFG. APPR.	JLM	D3580	REV. C
APPROVED	HS	SHEET 4 OF 4	SCALE
DE APPR.	DS	JIGGLE BRACKET	NTS
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